

### AMENDMENTS TO THE CLAIMS

1.-80. (Canceled)

81. **(Previously presented)** A modified human follicle stimulating hormone (FSH), which differs from the wild-type human FSH, said modified human FSH comprising an  $\alpha$ -subunit and a  $\beta$ -subunit, said  $\alpha$ -subunit comprising at least three basic amino acids in the  $\alpha$ -subunit at positions selected from the group consisting of positions 11, 13, 14, 16, 17, and 20, wherein by human is meant the number of amino acid substitutions in the wild-type sequence does not exceed one-half the number of amino acid differences at corresponding positions in the FSH subunits between human and bovine species.

82. **(Previously presented)** The modified human FSH of claim 81, said  $\alpha$ -subunit further comprising a fourth basic amino acid at a position selected from the group consisting of positions 11, 13, 14, 16, 17, and 20.

83. **(Previously presented)** The modified human FSH of claim 82, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 11, 13, 16, and 20.

84. **(Previously presented)** The modified human FSH of claim 82, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 11, 13, 17, and 20.

85. **(Previously presented)** The modified human FSH of claim 82, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 13, 14, 16, and 20.

86. **(Previously presented)** The modified human FSH of claim 82, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 13, 14, 17, and 20.

87. **(Previously presented)** The modified human FSH of claim 82, said  $\alpha$ -subunit further comprising a fifth basic amino acid at a position selected from the group consisting of positions 11, 13, 14, 16, 17, and 20.

88. **(Previously presented)** The modified human FSH of claim 87, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 13, 14, 16, 17, and 20.

89. **(Previously presented)** The modified human FSH of claim 87, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 11, 13, 14, 16, and 20.

90. **(Previously presented)** The modified human FSH of claim 81, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 11, 13, 14, 16, 17, and 20.

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91. **(Previously presented)** The modified human FSH of claim 81, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 13, 16, and 20.

92. **(Previously presented)** The modified human FSH of claim 81, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 14, 16, and 20.

93. **(Previously presented)** The modified human FSH of claim 81, wherein said basic amino acids are selected from the group consisting of lysine and arginine.

94. **(Previously presented)** A nucleic acid encoding the modified human FSH  $\alpha$ -subunit of claim 81.

95. **(Previously presented)** A vector comprising the nucleic acid of claim 94, wherein the vector is suitable for expressing the nucleic acid.

96. **(Previously presented)** A host cell comprising the vector of claim 95, wherein the host cell is suitable for expressing the nucleic acid.

97. **(Previously presented)** The modified human FSH of claim 81, wherein said modified human FSH has less than five amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

98. **(Previously presented)** The modified human FSH of claim 81, wherein said modified human FSH has less than four amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

99. **(Previously presented)** The modified human FSH of claim 81, wherein said modified human FSH has less than three amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

100. **(Previously presented)** The modified human FSH of claim 81, wherein said modified human FSH has less than two amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

101. **(Previously presented)** The modified human FSH of claim 81, wherein said modified human FSH has complete amino acid sequence identity with the corresponding wild-type human FSH in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

102. **(Previously presented)** A modified human follicle stimulating hormone (FSH), which differs from the wild-type human FSH, said modified human FSH comprising an  $\alpha$ -subunit and a  $\beta$ -subunit, said  $\alpha$ -subunit comprising a basic amino acid in the  $\alpha$ -subunit in at least

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one position selected from the group consisting of positions 11, 13, 14, 16, 17, and 20, wherein by human is meant the number of amino acid substitutions in the wild-type sequence does not exceed one-half the number of amino acid differences at corresponding positions in the FSH subunits between human and bovine species.

103. **(Previously presented)** The modified human FSH of claim 102, wherein a basic amino acid of the  $\alpha$ -subunit is at position 11.

104. **(Previously presented)** The modified human FSH of claim 102, wherein a basic amino acid of the  $\alpha$ -subunit is at position 13.

105. **(Previously presented)** The modified human FSH of claim 102, wherein a basic amino acid of the  $\alpha$ -subunit is at position 14.

106. **(Previously presented)** The modified human FSH of claim 102, wherein a basic amino acid of the  $\alpha$ -subunit is at position 16.

107. **(Previously presented)** The modified human FSH of claim 102, wherein a basic amino acid of the  $\alpha$ -subunit is at position 17.

108. **(Previously presented)** The modified human FSH of claim 102, wherein a basic amino acid of the  $\alpha$ -subunit is at position 20.

109. **(Previously presented)** The modified human FSH of claim 102, wherein said basic amino acid is selected from the group consisting of lysine and arginine.

110. **(Previously presented)** The modified human FSH of claim 102, further modified so that said  $\alpha$ -subunit comprises a basic amino acid in at least two positions selected from the group consisting of positions 11, 13, 14, 16, 17, and 20.

111. **(Previously presented)** The modified FSH of claim 110, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 14 and 20.

112. **(Previously presented)** The modified human FSH of claim 110, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 16 and 20.

113. **(Previously presented)** The modified human FSH of claim 110, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 13 and 14.

114. **(Previously presented)** The modified human FSH of claim 110, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 13 and 16.

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115. **(Previously presented)** The modified human FSH of claim 110, wherein said basic amino acids of the  $\alpha$ -subunit are at positions 13 and 20.

116. **(Previously presented)** The modified human FSH of claim 110 wherein said basic amino acids of the  $\alpha$ -subunit are at positions 14 and 16.

117. **(Previously presented)** The modified human FSH of claim 110, wherein said basic amino acid is selected from the group consisting of lysine and arginine.

118. **(Previously presented)** A nucleic acid encoding the modified human FSH  $\alpha$ -subunit of claim 102.

119. **(Previously presented)** A vector comprising the nucleic acid of claim 118, wherein the vector is suitable for expressing the nucleic acid.

120. **(Previously presented)** A host cell comprising the vector of claim 119, wherein the host cell is suitable for expressing the nucleic acid.

121. **(Previously presented)** The modified human FSH of claim 102, wherein said modified human FSH has less than five amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

122. **(Previously presented)** The modified human FSH of claim 102, wherein said modified human FSH has less than four amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

123. **(Previously presented)** The modified human FSH of claim 102, wherein said modified human FSH has less than three amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

124. **(Previously presented)** The modified human FSH of claim 102, wherein said modified human FSH has less than two amino acid substitutions in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

125. **(Previously presented)** The modified human FSH of claim 102, wherein said modified human FSH has complete amino acid sequence identity with the corresponding wild-type human FSH in said  $\alpha$ -subunit in positions other than positions 11, 13, 14, 16, 17, and 20.

126. **(Canceled)**